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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/027,200	12/20/2001	Gary G. Fenchel	50001-10510	1415
2574	7590	01/05/2005	EXAMINER	
JENNER & BLOCK, LLP			WU, QING YUAN	
ONE IBM PLAZA			ART UNIT	
CHICAGO, IL 60611			PAPER NUMBER	
			2126	

DATE MAILED: 01/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/027,200	FENCHEL, GARY G.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Qing-Yuan Wu	2126	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/11/02 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

1. Claims 1-18 are pending in the application.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. The following claim language is indefinite:

- i. As per claim 1, lines 9-10, it is uncertain how “the first process is still executing” when “the first process ending execution of the application when the second process is created” in lines 6-7 (i.e. is the first process executing other application at the same time?). In addition, it is uncertain whether the creation of the third process is a result of “determining that the first process is no longer executing”.
- ii. As per claims 7, and 13, these claims are rejected for the same reason as claim 1 above.

*Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-2, 5-8, 11-14, and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Decker (U.S. Patent 6,704, 806), in view of Applicant Admitted Prior Art (hereafter AAPA), further in view of Gregerson et al (hereafter Gregerson) (U.S. Patent 5,526,358).

6. As to claim 1, Decker teaches the invention substantially as claimed including a method for monitoring a software process running on a processor comprising the steps of:

running a first process that executes an application on the processor [col. 1, lines 41-47; col. 2, lines 31-36; 210, 220, 230, Fig. 2; 410, Fig. 4], and

the first process creating a second process to run on the processor, wherein the second process executes the application [col. 7, lines 66-67; 250, 260, Fig. 2; 445, 450, 465, Fig. 4];

the second process creating a third process to run on the processor, wherein the third process executes the application [col. 2, lines 34-36, 63; 270, 280, Fig. 2];

7. Decker does not specifically teach the first/second process ending execution of the application when the second/third process is created, wherein the first/second process receives a signal indicating death of the second/third process if the first/second process stops executing. However, Decker disclosed a hierarchical structure of parent process spawning a child process, and child process spawning grandchild process [col. 7, lines 66-67; abstract, lines 9-10; Fig. 2] and a system process termination function outputting a signal upon the termination of process [col. 9, lines 59, 60].

8. It is well known in the art in which a parent process spawning a child process and suspends its own operation until the child process aborts or is completed, in addition AAPA disclosed sending a signal to a parent process upon the death of a child process [AAPA, pg. 2, lines 1-3].

9. Furthermore, Decker as modified does not specifically teach the second process monitoring the first process to ensure that the first process is still executing, and the second process determining that the first process is no longer executing. However, Decker disclosed the possibilities of system corruption caused from defunct child process [col. 2, lines 11-18]. In addition, Gregerson teaches the monitoring of a hierarchical of network nodes in which the a child participating in the monitoring process check on the status of a parent node by sending a heartbeat message to ensure that the parent still exist, if the child does not receive an acknowledgment from the parent, the child assumes that it has become orphaned [Gregerson, col. 10, lines 5-30; 308, Fig. 10].

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10. It would have been obvious to one of ordinary skill in the art at the time the invention was made, to have combined the teaching of Decker and the teaching of Gregerson because the teaching of Gregerson further enhance the monitoring method of Decker by providing a child with the ability to monitor the status of the parent, which allow a defunct child process to take further action when it acknowledge that it became orphaned.

11. As to claim 2, Decker as modified teaches the invention substantially as claimed including wherein the second process polls the first process to ensure that the first process is still executing [Gregerson, col. 10, lines 12-14; 303, Fig. 10].

12. As to claim 5, this claim is rejected for the same reason as claim 1 above. In addition, Decker teaches an operating system executing on the processor provides the signal indicating death of the second process and the signal indicating death of the third process [col. 9, lines 51-54; AAPA, pg. 2, lines 1-3].

13. As to claim 6, Decker as modified does not specifically teach wherein the application relates to a wireless communication. However, Decker disclosed an executing application [col. 4, line 18]. It would have been obvious to one of ordinary skill in the art at the time the invention was made, to have recognized that the executing application could relate to a wireless communication or application relating to a variety of different technology.

14. As to claims 7-8, and 11-12, these are apparatus claims that correspond to method claims 1-2, and 5-6. Therefore, they are rejected for the same reason as method claims 1-2, and 5-6 above.

15. As to claims 13-14, and 17-18, these are machine-readable claims that correspond to method claims 1-2, and 5-6. Therefore, they are rejected for the same reason as method claims 1-2, and 5-6 above.

16. Claims 3-4, 9-10, and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Decker, AAPA, and Gregerson, further in view of Meth (U.S. PG Pub 20020087916).

17. As to claims 3-4, Decker as modified does not specifically teach periodically storing a state information associated with the application, and uses the state information to execute the application. However, Meth teaches checkpointing of processes and restoring it with the pre-existing parent-child relationships remaining intact [Meth, paragraphs 11, 12 and 58]. It would have been obvious to one of ordinary skill in the art at the time the invention was made, to have combined the teaching of Decker with the teaching of Meth because the teaching of Meth provides error recovery that allows a processes to restore to a point where it left off.

18. As to claims 9-10, these are apparatus claims that correspond to method claims 1-2, and 5-6. Therefore, they are rejected for the same reason as method claims 3-4 above.

19. As to claims 15-16, these are machine-readable claims that correspond to method claims 1-2, and 5-6. Therefore, they are rejected for the same reason as method claims 3-4 above.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qing-Yuan Wu whose telephone number is (571) 272-3776. The examiner can normally be reached on 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SUE LAO  
PRIMARY EXAMINER  
*Sue Lao*

Qing-Yuan Wu

Examiner

Art Unit 2127